

**This Page is Inserted by IFW Indexing and Scanning  
Operations and is not part of the Official Record**

**BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ **BLACK BORDERS**
- ☐ **IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- ☐ **FADED TEXT OR DRAWING**
- ☐ **BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- ☐ **SKEWED/SLANTED IMAGES**
- ☐ **COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- ☐ **GRAY SCALE DOCUMENTS**
- ☐ **LINES OR MARKS ON ORIGINAL DOCUMENT**
- ☐ **REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- ☐ **OTHER:** \_\_\_\_\_

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.**

St. Lager, Geoffrey

#-8

Access DB# 129453

(Refocus)

## SEARCH REQUEST FORM

Scientific and Technical Information Center

#34

Requester's Full Name: Gwen Liang Examiner #: 79180 Date: 8-9-04  
Art Unit: 2122 Phone Number 30 5-3985 Serial Number: 09/550,451  
Mail Box and Bldg/Room Location: CPKII 4B25 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

\*\*\*\*\*

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Complex Database Structure  
(New title = method and structure for relationally presenting database objects)  
Inventors (please provide full names): DAVISON, DAN

Earliest Priority Filing Date: 4/16/1999

\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

Concept: (See A-1)

Claim = 1 (focus on 1-3, 1-4, 1-5) sec C)

Support (See A-2)

Drawings: Figs 2 &amp; 3 (See B-1, B-2)

\* Assignees : AMDOCS SOFTWARE SYSTEMS LIMITED  
Nortel Networks, INC.  
Clarify INC

8/10/04 8:50 am

## STAFF USE ONLY

STAFF USE ONLY	Type of Search	Vendors and cost where applicable
Searcher: <u>Geoffrey St. Lager</u>	NA Sequence (#) _____	STN _____
Searcher Phone #: <u>308-7800</u>	AA Sequence (#) _____	Dialog <input checked="" type="checkbox"/>
Searcher Location: <u>4B30</u>	Structure (#) _____	Questel/Orbit _____
Date Searcher Picked Up: <u>8/10/04</u>	Bibliographic <input checked="" type="checkbox"/>	Dr. Link _____
Date Completed: <u>8/13/04</u>	Litigation _____	Lexis/Nexis _____
Searcher Prep & Review Time: <u>50</u>	Fulltext <input checked="" type="checkbox"/>	Sequence Systems _____
Clerical Prep Time: _____	Patent Family _____	WWW/Internet _____
Online Time: <u>280</u>	Other _____	Other (specify) _____



# STIC Search Report

## EIC 2100

STIC Database Tracking Number: 129453

TO: Gwen Liang  
Location: CPK2 4B25  
Art Unit : 2172  
Friday, August 13, 2004

Case Serial Number: 09550451

From: Geoffrey St. Leger  
Location: EIC 2100  
PK2-4B30  
Phone: 308-7800

[geoffrey.stleger@uspto.gov](mailto:geoffrey.stleger@uspto.gov)

### Search Notes

Dear Examiner Liang,

Attached please find the results of your search request for application 09550451. I searched Dialog's foreign patent files, technical databases, product announcement files and general files.

Please let me know if you have any questions.

Regards,

Geoffrey St. Leger  
4B30/308-7800

10/5/19 (Item 19 from file: 347)  
DIALOG(R) File 347:JAPIO  
(c) 2004 JPO & JAPIO. All rts. reserv.

00535926 \*\*Image available\*\*  
DATA RETRIEVAL DEVICE

PUB. NO.: 55-023526 [JP 55023526 A]  
PUBLISHED: February 20, 1980 ( 19800220)  
INVENTOR(s): MIYAI HITOSHI  
KIKUCHI YOSHIYASU  
SHIYUDO MASAMICHI  
APPLICANT(s): NEC CORP [000423] (A Japanese Company or Corporation), JP  
(Japan)  
APPL. NO.: 53-094772 [JP 7894772]  
FILED: August 02, 1978 (19780802)  
INTL CLASS: [3] G06F-015/40 ; G06F-007/22  
JAPIO CLASS: 45.9 (INFORMATION PROCESSING -- Other); 45.1 (INFORMATION  
PROCESSING -- Arithmetic Sequence Units); 45.4 (INFORMATION  
PROCESSING -- Computer Applications)  
JOURNAL: Section: P, Section No. 8, Vol. 04, No. 55, Pg. 9, April 24,  
1980 (19800424)

#### ABSTRACT

PURPOSE: To retrieve data only by inputting short retrieval information even in case of a large data volume, by forming data with a **tree** structure and **storing** information, which indicates inter- **data** **relations** , in a **storage** unit in a form of **table** .

CONSTITUTION: Retrieval information 11 inputted in a form of parallel code by retrieval information input device 1 is transferred to code conversion circuit 10 in a form of code, and alphabetic information out of retrieval information is converted to control signals and is transferred to timing signal output circuit 30. Data storage circuit 20 refers to the retrieval table in circuit 20 on a basis of control signals from circuit 30 and accesses the data storage part in circuit 20 on a basis of this table and outputs pertinent data to the next-stage output device as 2011

10/5/3 (Item 3 from file: 347)  
DIALOG(R) File 347:JAPIO  
(c) 2004 JPO & JAPIO. All rts. reserv.

06097820 \*\*Image available\*\*  
NAVIGATION DEVICE

PUB. NO.: 11-039339 [JP 11039339 A]  
PUBLISHED: February 12, 1999 ( 19990212)  
INVENTOR(s): FURUIKE YOSHIYUKI  
APPLICANT(s): DENSO CORP  
APPL. NO.: 09-198834 [JP 97198834]  
FILED: July 24, 1997 (19970724)  
INTL CLASS: G06F-017/30 ; G08G-001/0969; G09G-005/00

#### ABSTRACT

PROBLEM TO BE SOLVED: To retrieve a desired equipment without hierarchically increasing the partial memory capacity of a tree part even if all character strings of equipment names are inputted in a navigation device provided with an equipment retrieval function.

SOLUTION: The device uses a table part storing data of the equipment names sorted in the order of the Japanese syllabary and the **tree** part **storing data structure** where a **relation** between the inputted character string and the **table** number of the equipment name in the table part is made into **hierarchy**, and constitutes the table part with data of a retrieval auxiliary name in addition to data of the equipment name. Even if the number of inputted characters becomes larger than the number of the hierarchies of the tree part, the equipment name is retrieved from the inputted character by executing matching retrieval by using data of the retrieval auxiliary name of the table part.

10/5/13 (Item 13 from file: 347)  
DIALOG(R) File 347:JAPIO  
(c) 2004 JPO & JAPIO. All rts. reserv.

03125234 \*\*Image available\*\*  
DISPLAY METHOD FOR HIERARCHIC TABLE

PUB. NO.: 02-100734 [JP 2100734 A]  
PUBLISHED: April 12, 1990 ( 19900412)  
INVENTOR(s): TSURUOKA KUNITOSHI  
APPLICANT(s): NEC CORP [000423] (A Japanese Company or Corporation), JP  
(Japan)  
APPL. NO.: 63-253987 [JP 88253987]  
FILED: October 07, 1988 (19881007)  
INTL CLASS: [5] G06F-012/00 ; G06F-015/40 ; G09F-009/40; G09G-003/00  
JAPIO CLASS: 45.2 (INFORMATION PROCESSING -- Memory Units); 44.9  
(COMMUNICATION -- Other); 45.4 (INFORMATION PROCESSING --  
Computer Applications)  
JOURNAL: Section: P, Section No. 1072, Vol. 14, No. 313, Pg. 67, July  
05, 1990 (19900705)

#### ABSTRACT

PURPOSE: To easily display the hierarchic table by constituting the hierarchic table by assembling cells according to information wherein reference relation among the coordinates of the cells is described when the hierarchic table is assembled and displayed by using a master table and a slave table.

CONSTITUTION: Lines of the master table and relative lines of the slave table are read in and cells whose current coordinates are already determined are searched for according to the reference relation among the coordinates of the cells; and the contents of the cells and a frame are displayed, the current coordinates of the cells are updated. The operation is repeated, and consequently the hierarchic table where the contents of the master table and slave table are combined is assembled and displayed on a screen. Thus, a rectangle corresponding to one data in the table is regarded as a cell and a cell to be displayed and its coordinates are determined according to the reference relation among the coordinates of the respective cells and the current coordinates of the cell being displayed, so even when there is a cell which is variable in display position and the number of times of repetition, the hierarchic table is easily assembled and displayed

File 8: Ei Compendex(R) 1970-2004/Aug W1  
 (c) 2004 Elsevier Eng. Info. Inc.  
 File 35: Dissertation Abs Online 1861-2004/May  
 (c) 2004 ProQuest Info&Learning  
 File 202: Info. Sci. & Tech. Abs. 1966-2004/Jul 12  
 (c) 2004 EBSCO Publishing  
 File 65: Inside Conferences 1993-2004/Aug W2  
 (c) 2004 BLDSC all rts. reserv.  
 File 2: INSPEC 1969-2004/Aug W1  
 (c) 2004 Institution of Electrical Engineers  
 File 94: JICST-EPlus 1985-2004/Jul W3  
 (c) 2004 Japan Science and Tech Corp(JST)  
 File 483: Newspaper Abs Daily 1986-2004/Aug 12  
 (c) 2004 ProQuest Info&Learning  
 File 6: NTIS 1964-2004/Aug W3  
 (c) 2004 NTIS, Intl Cpyrght All Rights Res  
 File 144: Pascal 1973-2004/Aug W1  
 (c) 2004 INIST/CNRS  
 File 434: SciSearch(R) Cited Ref Sci 1974-1989/Dec  
 (c) 1998 Inst for Sci Info  
 File 34: SciSearch(R) Cited Ref Sci 1990-2004/Aug W2  
 (c) 2004 Inst for Sci Info  
 File 99: Wilson Appl. Sci & Tech Abs 1983-2004/Jul  
 (c) 2004 The HW Wilson Co.  
 File 583: Gale Group Globalbase(TM) 1986-2002/Dec 13  
 (c) 2002 The Gale Group  
 File 266: FEDRIP 2004/Jun  
 Comp & dist by NTIS, Intl Copyright All Rights Res  
 File 95: TEME-Technology & Management 1989-2004/Jun W1  
 (c) 2004 FIZ TECHNIK  
 File 438:

Set	Items	Description
S1	634926	TREE? ? OR HIERARCH??? OR PARENT(1W)CHILD
S2	165589	(RELATIONSHIP? ? OR RELATE? ? OR RELATION? ? OR STRUCTURE? ? OR REPORT??? OR DEPENDEN? OR ASSOCIATION? ? OR AFFILIATION? ? OR INTERRELATION? ?) (3N) (OBJECT? ? OR NODE? ? OR PARENT? ? - OR CHILD? ? OR CHILDREN? ? OR LEAF? ? OR LEAVES)
S3	633798	(RELATIONSHIP? ? OR RELATE? ? OR RELATION? ? OR STRUCTURE? ? OR REPORT??? OR DEPENDEN? OR ASSOCIATION? ? OR AFFILIATION? ? OR INTERRELATION? ?) (3N) (FOLDER? ? OR CONTAINER? ? OR ITEM? ? OR ELEMENT? ? OR DATA OR INFORMATION)
S4	2196	(STOR??? OR SAV??? OR CONTAIN??? OR MAINTAIN??? OR SUMMAR?- ?? OR SUMMARIZ? OR SUMMARIS? OR DISPLAY??? OR VIEW???) (7N) S2:- S3(7N) (TABLE? ? OR GRID? ? OR ARRAY? ? OR MATRIX? ? OR MATRIC- E? ?)
S5	229	S1 AND S4
S6	1043	(STOR??? OR SAV??? OR CONTAIN??? OR SUMMAR??? OR SUMMARIZ? OR SUMMARIS? OR DISPLAY??? OR VIEW OR VIEWED OR VIEWING) (7N) S- 2: S3(7N) TABLE? ?
S7	70	S1 AND S6
S8	52	RD (unique items)
S9	33	S8 NOT PY=2000:2004

File 275:Gale Group Computer DB(TM) 1983-2004/Aug 13  
     (c) 2004 The Gale Group  
 File 621:Gale Group New Prod.Annou.(R) 1985-2004/Aug 13  
     (c) 2004 The Gale Group  
 File 636:Gale Group Newsletter DB(TM) 1987-2004/Aug 13  
     (c) 2004 The Gale Group  
 File 16:Gale Group PROMT(R) 1990-2004/Aug 13  
     (c) 2004 The Gale Group  
 File 160:Gale Group PROMT(R) 1972-1989  
     (c) 1999 The Gale Group  
 File 148:Gale Group Trade & Industry DB 1976-2004/Aug 13  
     (c)2004 The Gale Group  
 File 624:McGraw-Hill Publications 1985-2004/Aug 12  
     (c) 2004 McGraw-Hill Co. Inc  
 File 15:ABI/Inform(R) 1971-2004/Aug 13  
     (c) 2004 ProQuest Info&Learning  
 File 647:CMP Computer Fulltext 1988-2004/Aug W1  
     (c) 2004 CMP Media, LLC  
 File 674:Computer News Fulltext 1989-2004/Jul W4  
     (c) 2004 IDG Communications  
 File 696:DIALOG Telecom. Newsletters 1995-2004/Aug 12  
     (c) 2004 The Dialog Corp.  
 File 369:New Scientist 1994-2004/Aug W1  
     (c) 2004 Reed Business Information Ltd.

Set	Items	Description
S1	414452	TREE? ? OR HIERARCH??? OR PARENT(1W)CHILD
S2	91674	(RELATIONSHIP? ? OR RELATE? ? OR RELATION? ? OR STRUCTURE? ? OR REPORT??? OR DEPENDEN? OR ASSOCIATION? ? OR AFFILIATION? ? OR INTERRELATION? ?)(3N)(OBJECT? ? OR NODE? ? OR PARENT? ? - OR CHILD? ? OR CHILDREN? ? OR LEAF? ? OR LEAVES)
S3	1005444	(RELATIONSHIP? ? OR RELATE? ? OR RELATION? ? OR STRUCTURE? ? OR REPORT??? OR DEPENDEN? OR ASSOCIATION? ? OR AFFILIATION? ? OR INTERRELATION? ?)(3N)(FOLDER? ? OR CONTAINER? ? OR ITEM? ? OR ELEMENT? ? OR DATA OR INFORMATION)
S4	11491	(STOR??? OR SAV??? OR CONTAIN??? OR SUMMAR??? OR SUMMARIZ? OR SUMMARIS? OR DISPLAY??? OR VIEW OR VIEWED OR VIEWING)(7N)S- 2:S3(7N)TABLE? ?
S5	73	S1(30N)S4
S6	54	RD (unique items)
S7	45	S6 NOT PY=2000:2004



File 347:JAPIO Nov 1976-2004/Apr(Updated 040802)

(c) 2004 JPO & JAPIO

File 350:Derwent WPIX 1963-2004/UD,UM &UP=200451

(c) 2004 Thomson Derwent

Set	Items	Description
S1	58209	TREE? ? OR HIERARCH??? OR PARENT(1W)CHILD
S2	15009	(RELATIONSHIP? ? OR RELATE? ? OR RELATION? ? OR STRUCTURE? ? OR REPORT??? OR DEPENDEN? OR ASSOCIATION? ? OR AFFILIATION? ? OR INTERRELATION? ?)(3N)(OBJECT? ? OR NODE? ? OR PARENT? ? - OR CHILD? ? OR CHILDREN? ? OR LEAF? ? OR LEAVES)
S3	124657	(RELATIONSHIP? ? OR RELATE? ? OR RELATION? ? OR STRUCTURE? ? OR REPORT??? OR DEPENDEN? OR ASSOCIATION? ? OR AFFILIATION? ? OR INTERRELATION? ?)(3N)(FOLDER? ? OR CONTAINER? ? OR ITEM? ? OR ELEMENT? ? OR DATA OR INFORMATION)
S4	1241	(STOR??? OR SAV??? OR CONTAIN??? OR SUMMAR??? OR SUMMARIZ? OR SUMMARIS? OR DISPLAY??? OR VIEW OR VIEWED OR VIEWING OR MA- INTAIN???) (5N)S2:S3(5N)TABLE? ?
S5	55	S1(30N)S4
S6	49	S5 AND IC=G06F
S7	15	S6 AND AC=US/PR
S8	13	S7 AND AY=(1965:2000)/PR
S9	32	S6 AND PY=1965:2000
S10	36	S8:S9

File 348:EUROPEAN PATENTS 1978-2004/Aug W02

(c) 2004 European Patent Office

File 349:PCT FULLTEXT 1979-2002/UB=20040805,UT=20040729

(c) 2004 WIPO/Univentio

Set	Items	Description
S1	57391	TREE? ? OR HIERARCH??? OR PARENT(1W)CHILD
S2	42393	(RELATIONSHIP? ? OR RELATE? ? OR RELATION? ? OR STRUCTURE? ? OR REPORT??? OR DEPENDEN? OR ASSOCIATION? ? OR AFFILIATION? ? OR INTERRELATION? ?) (3N) (OBJECT? ? OR NODE? ? OR PARENT? ? - OR CHILD? ? OR CHILDREN? ? OR LEAF? ? OR LEAVES)
S3	199713	(RELATIONSHIP? ? OR RELATE? ? OR RELATION? ? OR STRUCTURE? ? OR REPORT??? OR DEPENDEN? OR ASSOCIATION? ? OR AFFILIATION? ? OR INTERRELATION? ?) (3N) (FOLDER? ? OR CONTAINER? ? OR ITEM? ? OR ELEMENT? ? OR DATA OR INFORMATION)
S4	4286	(STOR??? OR SAV??? OR CONTAIN??? OR SUMMAR??? OR SUMMARIZ? OR SUMMARIS? OR DISPLAY??? OR VIEW OR VIEWED OR VIEWING OR MA- INTAIN???) (5N) S2:S3 (5N) TABLE? ?
S5	375	S1(30N)S4
S6	303	S5 AND IC=G06F
S7	228	S6 AND AC=US/PR
S8	133	S7 AND AY=(1965:1999)/PR
S9	90	S6 AND PY=1965:1999
S10	166	S8:S9
S11	19	S10/TI,AB,CM
S12	56	S10 AND S1/TI,AB
S13	65	S11:S12